Plant Pathology Circular No. 230
November 1981

Fla. Dept. Agric. & Consumer Serv.
Division of Plant Industry

RINGSPOT OF SCAEVOLA

J. J. McRitchie and G. C. Wisler

Scaevola frutescens (Mill.) Kurt Krause is a perennial shrub which is particularly valuable in landscaping in South Florida where a salt-tolerant planting is required. It belongs to the family Goodeniaceae which contains about 14 genera and 320 species, most of them indigenous to Australia, tropical Africa, Polynesia, and New Zealand (3).

Recently, a chlorotic and necrotic ringspot was detected in plantings of this shrub in South Florida by Agricultural Products Specialist R. Driggers and submitted to the Bureau of Plant Pathology for diagnosis. Surveys of the area indicated that the disease is widespread and occurs in a high percentage of this host in Florida. Similar symptoms were noted in 1946 in Oahu, Hawaii, but apparently no studies were initiated (2).

SYMPTOMS. Symptoms first appear as subcircular, translucent areas on the leaves which become chlorotic and/or necrotic along the periphery. Symptoms may also take the form of oak-leaf patterns on Scaevola leaves (fig. 1). Symptoms are most readily observed during the fall and winter months. Plants may appear healthy at other times of the year.

Fig. 1. Leaf of Scaevola frutescens with cholorotic oak-leaf pattern caused by cucumber mosaic virus. (DPI Photo No. 702358)

CAUSE. Host range, electron microscopy, inclusion body examination, and serological tests indicated that the causal agent is cucumber mosaic virus (CMV) (4); however, it is not identical to other CMV strains to which it was compared. The properties of the members of the CMV group overlap so that isolate identification is difficult (1).

CMV has an extremely wide host range, occurring in over 40 families. We were unable to locate, however, any other mention of CMV infecting a member of the family Goodeniaceae.

CONTROL. CMV may be transmitted by over 60 species of aphids, in some instances through seed, and is easily mechanically transmitted (1). The viral characteristics of this Scaevola strain have not been determined; however, severely infected plants in the nursery should be isolated from other plantings, and insect control should be practiced.

SURVEY AND DETECTION. Look for chlorotic or necrotic rings or patterns on leaves of Scaevola, particularly during cool months. Laboratory examination is essential for positive diagnosis.

LITERATURE CITED.

1. FRANCKI, R. I. B., D. W. MOSSOP, and T. HATTA. 1979. Cucumber mosaic virus. CMI/AAB descriptions of plant viruses. No. 213 (No. 1 revised). Commonw. Mycol. Inst. Kew, England. 6 p.
2. JENSEN, D. D. 1949. Papaya virus diseases with special references to papaya ringspot. Phytopathology 39:191–211.
3. LONG, R. W., and D. LAKELA. 1971. A flora of tropical Florida. Univ. of Miami Press. Coral Gables. 962 p.
4. MCRITCHIE, J. J., and G. C. WISLER. 1981. Ringspot of Scaevola. Proc. Fla. State Hort Soc. 94: (in press).

Contribution No. 415, Bureau of Plant Pathology, P. O. Box 1269, Gainesville, FL 32602.